

Elementary Multi-Course Scheduling



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Recommended Procedures

Overview

Elementary schools have traditionally scheduled students for a single homeroom class. Many schools are now wanting to schedule students following a secondary school format with each student is enrolled in multiple classes.

This allows for added flexibility with grading and allows for better tracking of students who are in special programs. The main difference is that under the single homeroom format, just the homeroom course appeared in gradebook and teachers created multiple subjects. With the Multi-Course format subjects are put into the Master Schedule and appear as courses in the gradebook rather than subjects.

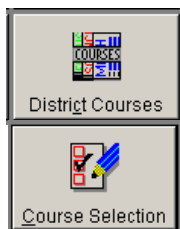
District Preparation

There are some changes to SIS that must be put in place before you can schedule under the multi-course format. Some changes will require the help of your district technical staff in cooperation with the USOE staff. They are listed here for your information.

- Your track Periods Per Day setting must be changed to reflect the number of courses you are going to schedule.
- Additional Mark Definitions may need to be setup and assigned to your track.
- In Districts where the “District Courses” are managed at the District Level, any new course offerings you need, will have to be input at the district level.

School Preparation

- Subjects such as Reading, Math, and Social Science, must now be added as courses to “District Courses” and must be assigned to the track in “Course Selection” module.



Note: As each course is added to District Courses, ensure that it is setup to use the appropriate Mark Set. If you plan to teach both a Reading Class that awards specialized Elementary Marks, and a Reading Class that awards the standard letter grades in upper grades, you will need two separate course numbers.

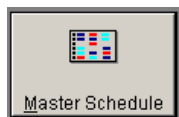


Online Help for District Courses <http://sis2000.usoe.k12.ut.us/System/dist.htm>

Online Help for Course Selection <http://sis2000.usoe.k12.ut.us/Scheduling/corselect.htm>

Building the Master Schedule

Scheduling Homerooms



The Master Schedule should be built as it has been in the past, with each teacher having a homeroom class for the grade level they teach. The one exception is that the “Assign Grades” and “Post to History Flags” should be checked off. This will keep the homeroom class from appearing in the gradebook.

☐ Assign Grades?
☐ Post To History?

Example: If Ellen Smith is teaching 4th Grade she will have a 4th grade homeroom class listed in first period of the master schedule.

Term: All Year (3Trimesters)
Faculty: Smith, Ellen [112021]

Per.	Cycle Day 1
1	14000-2 Fourth Grade

Assign other Courses/Subjects

Once the Homeroom classes have been assigned, you can now assign the other subject/courses for the teacher.

Example: If Ellen Smith were going to teach 4 additional subjects (Reading, Spelling, Science, and Social Science) we would schedule them into the successive periods. The difference between these courses and the homeroom is that these should have the “Assign Grades” and “Post To History” Flags checked on and the “Take Attendance” and “Count Attendance” should be checked off.

☒ Assign Grades?
☒ Post To History?
☐ Take Attendance? ☐ Count Attendance?

Note: The process is made easier if the flags are checked appropriately in district courses since the default for attendance and grades comes from District Courses.

Also make sure the appropriate Mark Definition is chosen for each course.

Mark Definition
Elementary All Year

The end result is that Ellen Smith now is assigned to teacher 5 different courses and, as yet, there is no relationship between the courses other than the fact that they are taught by the same teacher.

Her schedule would now appear as follows.

Note: You may have noticed that in the grid to the right all of Mrs. Smith’s courses have a section number of 2. It is not required that they all have the same section number, however, setting the section numbers to the same value can make Course Linking simpler (Course Linking is optional and discussed later). You can only change the section number when you first assign the course to the teacher. After the initial assignment is made the section number is not “editable”.

Also note that although we have 7 periods available, we only chose to use 5 in this case and it is not necessary to fill all of the periods.

Term: All Year (3Trimesters)
Faculty: Smith, Ellen [112021]

Per.	Cycle Day 1
1	14000-2 Fourth Grade
2	10001-2 Reading
3	10002-2 Spelling
4	10004-2 Science
5	10005-2 Social Science
6	
7	

Online Help for Master Schedule Editor <http://sis2000.usoe.k12.ut.us/Scheduling/msed03.htm>

At this point there are actually two options for scheduling the students. Students can be scheduled by using the Assign Students with using the “<All Courses>” option, or you can choose to run the “Loader”. If your school traditionally pre-selects or predetermines which teacher a student will have, you do not have to use the “Loader” and can skip to the last page of this document. However, if you would like to randomly assign students to teachers, you need to continue with the instructions on this page.

Preparing to Load

Course Linking



Although this step is not required unless you plan to use the “Loader”, the object of course linking is to link all courses assigned to a teacher so that each student when scheduled for the teachers’ homeroom class is also automatically scheduled in the teacher’s other classes.

It is recommended that you have a copy of the “Master Schedule Report” to reference as you setup course linking.

Run the report with the “Group by” option set to teacher, you may also want to change the sort so that it is sorted by period then course.

Group by:

☐ Course

☒ Teacher

☐ Period

☐ Classroom

Period	Ascending
Course Code	Ascending

The resulting report will show each course assigned to each teacher. The example on the right shows course number, course name, section number, term and period.

Smith, Ellen		112021			
14000	Fourth Grade	2	YT	1	
10001	Reading	2	YT	2	
10002	Spelling	2	YT	3	
10004	Science	2	YT	4	
10005	Social Science	2	YT	5	

With report in hand you are now ready to do the actual linking.

- Launch Course Linking and then make sure the appropriate track is selected.
- Referring to the report, we can see that 14000/2 is Mrs. Smiths’ homeroom class. We want the homeroom to be the root so we choose that course from the list on the right and drag and drop it into the blank work area to the left. We now have Mrs. Smiths’ Fourth Grade (Homeroom) 14000/2 as the root for the linking. It appears in bolded blue to indicate it is the root.

14000/2

13000/3 - Third Grade
14000/1 - Fourth Grade
14000/2 - Fourth Grade
14000/3 - Fourth Grade
15000/1 - Fifth Grade

We now drag and drop the other courses one by one taking care to drop each *on top of the root*.

Note: If you fail to drop each course on top of the root you actually create new roots.

When you have completed the drag and drop process for all of Mrs. Smith’s classes the linked courses will appear like the example to the right.

14000/2
10001/2
10002/2
10004/2
10005/2

Note: If you have made all the section numbers unique by teacher, as in this example, the course linking can be done without having to reference the Master Schedule Report each time. If the section numbers vary the linking can still be done but additional care must be taken to make sure that the courses linked all belong to the same teacher.

- Repeat the course linking steps for each teacher.

Online Help for Course Linking <http://sis2000.usoe.k12.ut.us/Scheduling/links.htm>

Preparing to Load (cont.)

Course Requests

A course request must be entered for each student.

- Launch the “Course Requests” module.



After choosing the student, click add and set type to course; choose the homeroom class either by typing in the course code or choosing from the description list; choose the teacher from the faculty list and check the “Faculty Selection Must Be Honored” check box. (See graphic below)

Note: Only put in a request for the homeroom. The course linking handles the other courses. Also, choosing a teacher assumes that teachers have been pre-selected for students. If you wish, you could omit the teacher selection and the loader would randomize teacher selection. It is possible to select the teacher for some students and let the loader randomize for the others.

The 'Add Course Request' dialog box contains the following fields and options:

- Type:** Course (dropdown)
- Code:** 14000 (text box)
- Description:** 14000 -- Fourth Grade (dropdown)
- ☐ T/A
- Faculty:** Smith, Ellen [112021] (dropdown)
- ☒ Schedule with this faculty
- ☐ Do not schedule with this faculty
- Priority:** 1 (text box)
- ☒ Lock Request
- ☒ Faculty Selection Must Be Honored

Online Help for Course Requests <http://sis2000.usoc.k12.ut.us/Scheduling/crsreq2.htm>

Loading

After you have entered a request for each student you can now run the loader.

- Launch the “Loader” module; make sure the appropriate track is chosen.

Note: If you cannot select the appropriate track please contact your district technical support.



Click the “Loader Options” button

[Loader Options...](#)

If you have pre-selected which teacher each student will have you can load with the default options. It is recommended however, that you check off the “Use Rescheduling” option (lower right of the screen). Your settings would appear as they do in the graphic to the right.

The 'SchoolNet C/S - Loader Options' dialog box contains the following sections and options:

- Description:** Default Options
- Standard Options:**
 - ☐ Use Student Alternates
 - ☐ Use Global Alternates
 - ☒ Use Course Rules
 - ☐ Use Demographic Balancing
 - ☐ Use Course Load Balancing
 - ☒ Use Teacher Preferences
 - ☐ Use Term Preferences
 - ☐ Set Maximum Alternates Used To: 0
 - ☐ Set Minimum Primary Requests Used To: 0
- Advanced Options:**
 - ☐ Set Maximum Unscheduled Requests To: 0
 - ☐ Set Overfill Percentage To: 0
 - Time Limit (Hours): 2
 - Maximum Patterns: 5000 X 1000
- Optional Constraint Priorities:**
 - Minimize Alternates: 0
 - "Soft" Course Rules: 2
 - "Soft" Load Balance: 3
 - Teacher Preference: 4
 - Term Preference: 5
 - Demographic Balance...
- ☒ Use Rescheduling
- Rescheduling Settings:**
 - % Full to Start Balancing: 30
 - Incremental %: 10
 - Maximum Students: 60
- Buttons:** Save, Cancel

Loading (cont.)

If you have not pre-selected teachers, and did not specify teachers on the request itself because you want the loader to randomize teacher assignment you will want to set the options differently.

You will want to check the “Use Rescheduling” option on to ensure an even load of students between teachers.

You may also choose to turn on the “Use Demographic Balancing” option. This tells the loader to balance students based on demographic factors.

You will notice that when you check this option the “Demographic Balance” button becomes enabled.

Demographic Balance...

The screenshot shows the "SchoolNet C/S - Loader Options" dialog box. It has a title bar with a small icon and a close button. The main area is divided into several sections. At the top, there's a "Description:" field with the text "Default Options". Below this is the "Standard Options:" section, which contains a list of checkboxes: "Use Student Alternates", "Use Global Alternates", "Use Course Rules" (checked), "Use Demographic Balancing" (checked), "Use Course Load Balancing", "Use Teacher Preferences" (checked), "Use Term Preferences", "Set Maximum Alternates Used To" (with a spinner set to 0), and "Set Minimum Primary Requests Used To" (with a spinner set to 0). To the right of these is the "Optional Constraint Priorities:" section, which has five spinners: "Minimize Alternates:" (0), "Soft Course Rules:" (2), "Soft Load Balance:" (3), "Teacher Preference:" (4), and "Term Preference:" (5). Below these is a button labeled "Demographic Balance...". In the bottom right of this section is a checkbox labeled "Use Rescheduling" which is checked. Below the "Standard Options:" section is the "Advanced Options:" section, which contains "Set Maximum Unscheduled Requests To" (spinner set to 0), "Set Overfill Percentage To" (spinner set to 0), "Time Limit (Hours):" (spinner set to 2), and "Maximum Patterns:" (a text field with "5000" and a multiplier "X 1000"). At the bottom of the dialog are three buttons: "Save", "Cancel", and a "Demographic Balance..." button on the left.

When you click the Demographic “Balance Button” you can configure which demographic items you wish to balance.

Gender is checked by default if you wish to also try and balance classes by Ethnicity you would want to check Ethnicity and set the priority. In the example below Gender balancing has a higher priority than Ethnic balance.

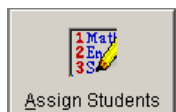
The screenshot shows the "Student Loader - Define Demographic Balance" dialog box. It has a title bar with a small icon and a close button. The main area contains the text "Check fields on which to perform demographic balancing and set their priority (low value is high priority)." Below this is a table with three rows. The first row has a checked checkbox for "Gender" and a spinner for "Priority" set to 1. The second row has a checked checkbox for "Ethnicity" and a spinner for "Priority" set to 2. The third row has an unchecked checkbox for "Service" and a spinner for "Priority" set to 3. At the bottom of the dialog are two buttons: "Save" and "Cancel".

- After you’ve set your “Loader Options” you can load the student schedules by clicking the Load Button.

When the loading run is complete you check the results by running various reports i.e. Summary of Loader Results, Unscheduled Student Report, etc.

Online Help for Loader <http://sis2000.usoc.k12.ut.us/Scheduling/loadintr.htm>

Schedule Using Assign Students



If teachers have been pre-selected or predetermined you may want to use the “Assign Students” Module. Scheduling students in multiple courses using the “Assign Students” Module is not much different than scheduling a single homeroom course.

The main difference is that when scheduling multiple courses the course list has a default option of “<All Courses>”.

For Example if we select Ellen Smith from the list of teachers and click the drop down list of courses you will see all of the courses Mrs. Smith teaches. You have the option of scheduling a student (or students), in a single step, into any course Mrs. Smith teaches or “All Courses” assigned to Mrs. Smith (the default is All Courses).

< All Courses >
< All Courses >
10001-2: Reading
10002-2: Spelling
10004-2: Science
10005-2: Social Science
14000-2: Fourth Grade

The color-coding implemented by the “Assign Students” Module has more significance when scheduling multiple courses.

Scheduled

Pale blue indicates that a student is “Scheduled” for all courses assigned to the select teacher.

Partial Schedule

Yellow indicates that the student has a “Partial Schedule” with the selected teacher. In other words, the student is scheduled for at least one course with the selected teacher, but not all courses.

More Scheduled

Pale Pink indicates that for the course selected, the student has “More Scheduled” with the selected teacher. In other words, if we select Mrs. Smith’s Reading course, some students will appear in pink indicating that they are also scheduled in other classes with Mrs. Smith.

Not Current

Gray indicates the student has a schedule record for the selected class and teacher, but is not actively enrolled on the current date.

Example: In the graphic to the right you will notice that “All Courses” is selected. One student is colored blue which indicates he is scheduled for all of Mrs. Smith’s courses. One student is in yellow indicating she is scheduled partially with Mrs. Smith but is not scheduled in all of Mrs. Smith’s courses.

Name	Ident	M/F
Argyle, Ryan R	134100800	M
Baber, Jessica Y	646265570	F

This would be a common occurrence if you have a student that is scheduled with the homeroom teacher for all courses excepting a course where the student is receiving special education services or being taught by another teacher. In this case the student would actually be scheduled with another teacher.

Online Help for Assign Students <http://sis2000.usoe.k12.ut.us/Scheduling/StuAssign.htm>